

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A method of generating a glycopeptide library, comprising the steps of:
 - (a) randomly glycosylating a scaffold having at least one glycosylation site with at least one glycosyl donor, optionally blocking unreacted glycosylation sites on the glycosylated scaffolds and optionally selectively removing one or more protecting groups on the carbohydrate groups introduced at the first level; whereby a first level library of glycosylated scaffolds is created; and then
 - (b) optionally randomly glycosylating said first level library of glycosylated scaffolds, or a combination of first level libraries of glycosylated scaffolds, with at least one glycosyl donor, and optionally selectively removing one or more designated protecting groups on the carbohydrate groups introduced at the second level; whereby a second level library of glycosylated scaffolds is created.
2. (Withdrawn) A method according to claim 1, which further comprises further randomly glycosylating said second level library of glycosylated scaffolds, or a combination of second level or first and second level libraries of glycosylated scaffolds, with at least one glycosyl donor, and optionally selectively removing one or more designated protecting groups on the carbohydrate groups introduced at the third level; whereby a third level library of glycosylated scaffolds is created; and optionally repeating the foregoing step to produce fourth and higher level libraries of increased diversity.
3. (Withdrawn/Currently Amended) A method according to claim 2, wherein said peptide has an amino acid sequence (SEQ ID NO: 1) GVTSAPDTRPAGSTA.
4. (Withdrawn/Currently Amended) A method according to claim 2, wherein said peptide has an amino acid sequence (SEQ ID NO: 2) GSTA.

5. (Withdrawn) A method according to claim 2, wherein said unreacted glycosylation sites are blocked.
6. (Withdrawn) A method according to claim 5, wherein said sites are blocked by acetylation.
7. (Withdrawn) A method according to claim 3, wherein said glycosyl donors are selected from the group consisting of GalNAc, β Gal(1-3)*GalNAc and sialyl.
8. (Withdrawn) A method according to claim 4, wherein said glycosyl donors are selected from the group consisting of GalNAc, β Gal(1-3)*GalNAc and sialyl.
9. (Withdrawn) A method according to claim 1, wherein hydroxyl groups on said glycosyl donors are protected prior to reaction of said glycosyl donors with said scaffolds or said glycosylated scaffolds.
10. (Withdrawn) A method according to claim 9, wherein said hydroxyl groups are deprotected after reaction with said scaffolds or said glycosylated scaffolds.
11. (Withdrawn) A method according to claim 10, wherein some of said hydroxyl groups are removed during said deprotection step.
12. (Withdrawn) A method according to claim 1, wherein said scaffold is a peptide.
13. (Withdrawn) A method according to claim 1, wherein said scaffold does not contain peptide linkages.
14. (Withdrawn) A method according to claim 1, wherein said scaffold comprises natural glycosylation sites.

15. (Withdrawn) A method according to claim 1, wherein said scaffold comprises unnatural glycosylation sites.

16. (Withdrawn) A method according to claim 1, wherein said scaffold comprises tandem repeats.

17. (Withdrawn) A method according to claim 1, wherein each glycosylation site on said scaffold is unique and distinguishable from other sites due to distinct structural features in the vicinity of the site.

18. (Withdrawn) A method according to claim 1, wherein said scaffold is a hybrid scaffold comprising a non-peptide polymer to which natural amino acid side chains with natural glycosylation sites are attached.

19. (Withdrawn) A method according to claim 1, wherein said glycosylation sites provide hydroxy functions for O-glycosylation or carboxy or carboxamido functional groups for N-glycosylation.

20. (Withdrawn) A method according to claim 1, wherein said glycosylation sites include one or more of serine, threonine, hydroxylysine and asparagine.

21. (Withdrawn) A method according to claim 1, wherein said glycosylation sites consist entirely of d-optical configuration.

22. (Withdrawn) A method according to claim 1, wherein said scaffold is constructed entirely of d-amino acids.

23. (Withdrawn) A method according to claim 1, wherein said scaffold is linear.

24. (Withdrawn) A method according to claim 1, wherein said scaffold is cyclic.

25. (Withdrawn) A method according to claim 1, wherein said scaffold comprises a UV-active or fluorescent label.

26. (Withdrawn) A method according to claim 1, wherein said scaffold comprises hydrophobic amino acids which increase the solubility of the scaffold in organic solvents.

27. (Withdrawn) A method according to claim 1, wherein said glycosylation sites are spaced, singly or in clusters, between sequences that include hydrophobic amino acids.

28. (Withdrawn) A method according to claim 1, wherein lipid chains are incorporated into said scaffold.

29. (Withdrawn) A method according to claim 1, wherein said glycosyl donors are unnatural.

30. (Withdrawn) A method according to claim 1, wherein said glycosyl donors comprise structures associated with adhesion ligands for bacterial receptors that are expressed on human cell surface antigens.

31. (Withdrawn) A method according to claim 1, wherein said glycosyl donors comprise structures associated with malignant cell antigens.

32. (Previously Presented) A combinatorially-generated library of glycopeptides prepared by randomly reacting a peptide scaffold with either (1) carbohydrate structures associated with human cancer-associated mucins or (2) carbohydrate structures which function as adhesion ligands for bacterial receptors that are expressed on human cell surface antigens.

33. (Previously Presented) A glycopeptide library according to claim 32, wherein said peptide scaffold is a tandem repeat of mucin-1 (MUC1) core protein and galactosamine, N-acetylgalactosamine, and sialyl-galactosamine are reacted with said MUC1 tandem repeat to produce a library of carcinoma-associated mucins.

34. (Previously Presented) A library of glycosylated scaffolds produced by the method of claim 1.

35. (Previously Presented) A library of glycosylated scaffolds produced by the method of claim 2.

36. (Previously Presented) A library of glycosylated scaffolds produced by the method of claim 30.

37. (Previously Presented) A library of glycosylated scaffolds produced by the method of claim 31.

38. (Previously Presented) A method of identifying a biologically-active compound in a combinatorially-generated glycopeptide library, comprising:
generating a library of glycosylated scaffolds according to claim 34; and
screening components of said library for a biologically-active compound that has competitive inhibitory, immunostimulatory or antibody activity.

39. (Withdrawn) A method of identifying an anti-viral compound, comprising:
generating a library of glycosylated platforms according to claim 34; and
screening components of said library for anti-viral activity.

40. (Withdrawn) A method of identifying an anti-bacterial compound, comprising:
generating a library of glycosylated scaffolds according to claim 30; and
screening components of said library for the ability competitively to inhibit bacterial adhesion to a host cell.

41. (Withdrawn) A method of identifying compounds for detection or treatment of cancer, comprising:

generating a library of glycosylated platforms according to claim 31; and
screening components of said library for anti-cancer activity.

42. (Previously Presented) A glycopeptide library according to claim 32, wherein said carbohydrate structures are selected from the group consisting of GalNAc, β Gal(1-3) α GalNAc and sialyl-GalNAc.

43. (Previously Presented) A glycopeptide library according to claim 32, wherein the peptide scaffold is a cyclic peptide.

44. (Previously Presented) A glycopeptide library according to claim 32, wherein the peptide scaffold is a tandem repeat of MUC1.